SPEECHSECURE™ SPEAKER VERIFICATION

BENEFITS OF SPEECHSECURE

- **Provide your automated telephone systems with an extra level of security using voice biometrics, the unique characteristics of a caller's voice.**
- **Increase convenience for your customers by eliminating PINs or by providing them flexibility in selecting easy-to-remember passwords.**
- **Improve customer service by reducing caller hold times for routine applications, such as Password Reset.**
- **Provide a personal touch, by identifying your callers based on their voice and customizing the application for their favorite choices and information.**
- **Reduce fraud and theft by using SpeechSecure to detect if it is likely that a caller is a known fraudulent caller, and then routing to an agent for additional scrutiny.**
- **Easily incorporate speaker verification into any system architecture using Web services-based integration.**

PRODUCT DESCRIPTION

Nuance SpeechSecure speaker verification software uses the unique biometric characteristics of a person's voice to authenticate callers or identify them within a list of callers. It can be used with speech recognition or other services to enhance security and caller convenience.

By analyzing the unique characteristics of a caller's voice using multiple, proprietary algorithms, SpeechSecure creates a voiceprint for each caller. During the enrollment process. SpeechSecure encodes the reference voiceprint–a template that reflects the unique structure of each user's vocal tract–and saves it as part of the caller's account profile for verification purposes.

SpeechSecure can be used to deliver personalized service by verifying a caller based on an initial greeting. For example, if caller says, "Hello, it's me," the system might identify the caller, greet her by name, and then deliver customized or preferred services without further prompting.

SpeechSecure can be deployed in multiple verification modes, offering flexibility for various applications, including

One-step Verification: The system recognizes and verifies a single response, such as an account number, that identifies the caller, eliminating the need for callers to remember a password.

Challenge-response Verification: The system prompts for variable text, such as a random digit string, and verifies the voiceprint of the reply.

Two-step Verification: By verifying a secret password, and the voiceprint this mode offers the highest level of security.

Verification Detection: In this mode, each caller response is passed to the verification system to determine clandestinely if the caller is who he or she originally claimed to be.

SpeechSecure provides unique features to deliver high performance and accuracy–even in noisy environments. A pre-processor filters non-speech noise and patented fusion technology is used to apply multiple voiceprint algorithms for reduces error rates.

NUANCE®

The SpeechSecure solution, available via a Web Services interface, includes:

- *SpeechSecure Authentication Engine:* Biometric software that identifies callers based on unique voiceprints.
- *SpeechSecure Server:* Web services for use with any speech application platform incorporating voiceprint database management.

The Nuance family of network speech solution also includes OpenSpeech® Recognizer, RealSpeak™ text-to-speech, OpenSpeech DialogModules® components, SpeechAttendant™ auto attendant, and SpeechPAK™ packaged application kits for superior caller experience through open standards.

FEATURES/BENEFITS

Patented Fusion Technology

Using multiple voiceprint algorithms and patented fusion technology, SpeechSecure has error rates four to five times lower than competitive engines using only one algorithm. Plus it enables users to select shorter, easier-to-remember passphrases.

Language and Vocabulary Independent

Because SpeechSecure operates independently from a recognizer's fixed vocabulary, your callers have the flexibility to select any passphrase.

Flexible, Modular Architecture

You can deploy SpeechSecure on your IVR platform or as an independent server that scales to support multiple applications.

Recognizer Independent

You can deploy SpeechSecure technology with our without a speech recognition system. SpeechSecure is also suitable for embedded and Web-based applications.

High-speed Computation

SpeechSecure ensures caller satisfaction through verifying callers without delay, performing 20 verifications per second regardless of the number of voiceprints in the database.

Signal Pre-processing

SpeechSecure isolates speech from extraneous noise to deliver high accuracy in noisy environments.

Configurable Parameters

SpeechSecure is easily customizable, allowing your company to adjust security thresholds for each of its applications.

Online Adaptation

Your application can continually tune voiceprints after enrollment to ensure that the voiceprint tracks the speaker over time for high accuracy.

SYSTEM REQUIREMENTS

SpeechSecure Server is a Windows-based solution compatible with Microsoft SQL Server 2000, provides logging and reporting to track usage and tune for security.

- Pentium 4 class machine, dual CPU recommended
- 512 MB of RAM, 1 GB recommended
- 25 MB of disk space for the server installation
- Windows 2003 Server
- JDBC database connectivity
- Support for Oracle database servers (e.g. 10g)

ABOUT NUANCE COMMUNICATIONS, INC.

Nuance is the leading provider of speech and imaging solutions for businesses and consumers around the world. Its technologies, applications and services make the user experience more compelling by transforming the way people interact with information and how they create, share and use documents. Every day, millions of users and thousands of businesses, experience Nuance's proven applications and professional services. For more information, please visit nuance.com.

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